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Floodplain Management and Flood Resilience: Current Policy and Considerations for Congress

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An issue for Congress is how federal floodplain policy shapes implementation of federal projects and programs. Floodplain policy has particular relevance for federal disaster recovery assistance and infrastructure support. President Trump and, earlier, Presidents Obama and Carter have provided direction on federal floodplain policy. This Insight describes this presidential direction and presents considerations for Congress.

Presidential Direction and Current Policy

Three executive orders (E.O.s) are directly relevant to current federal floodplain policy:

- E.O. 13807 (Trump, 2017), *Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects*;
- E.O. 13690 (Obama, 2015), *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input*; and
- E.O. 11988 (Carter, 1977), *Floodplain Management*.

On August 15, 2017, President Trump signed E.O. 13807 in an effort to streamline federal infrastructure approval. Among other actions, E.O. 13807 revoked E.O. 13690. E.O. 13690 modified federal policy by amending E.O. 11988. A principal action of E.O. 13690 was to establish a Federal Flood Risk Management Standard (FFRMS). By revoking E.O. 13690, E.O. 13807 appears to have eliminated the FFRMS and returned federal floodplain policy to the original text of E.O. 11988.

E.O. 11988

E.O. 11988 requires that

- federal actions are to avoid, if alternatives are available, supporting development in the 100-year floodplain (also referred to as the 1% annual-chance floodplain or the floodplain for the Base Flood Elevation [BFE]), and

- federal agencies responsible for real property and facilities are to design and construct structures and facilities consistent with National Flood Insurance Program (NFIP) regulations, which are largely based on the BFE.

Under implementation guidance for E.O. 11988, critical actions (e.g., construction of prisons and emergency services) are to avoid the 500-year floodplain if alternatives are available.

Revoked E.O. 13690

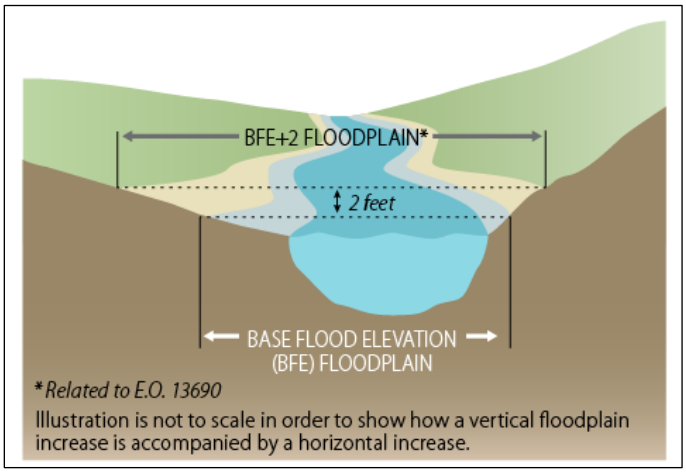
The stated aim of E.O. 13690 was to improve the flood resilience of communities and federal assets. Federal agencies were to apply the FFRMS as a minimum flood-resilience standard for federally funded projects, which the FFRMS defined as actions where federal funds were used for new construction, substantial improvement, or to address substantial damage to structures and facilities.

E.O. 13690 modified the requirements of E.O. 11988 largely by redefining the floodplain at the foundation of federal floodplain management policy. Rather than relying on the BFE floodplain, E.O. 13690 provided that the floodplain be determined by

- 2 feet above BFE (BFE+2);
- 500-year floodplain; or
- climate-informed science.

Figure 1 illustrates the difference in the horizontal and vertical determination of the BFE floodplain and the BFE+2 floodplain.

Figure 1. Illustration of E.O. 13690 Floodplain Using 2-Foot Vertical Increase Above Base Flood Elevation



Source: Congressional Research Service.

E.O. 13690 required that

- federal actions avoid supporting development in an E.O. 13690 floodplain;
- federally funded projects were to be flood resilient (through elevation of structures and facilities or other means) if located within the E.O. 13690 floodplain; and
- agencies were to use natural systems, ecosystem processes, or nature-based approaches, where possible, when developing project alternatives.

Public comments indicated that some stakeholders (e.g., state floodplain managers, environmental advocates) supported E.O. 13690 and the FFRMS, believing that enhanced floodplain management and a resilience standard would reduce damages from floods and protect floodplains' natural systems. Other stakeholders (e.g., some county representatives, homebuilders, waterway industry interests) questioned the cost implications and implementation challenges and expressed concerns that compliance would hinder economic development in coastal and riverine communities.

For FY2017, Congress allowed for E.O. 13690 implementation to proceed, with a few exceptions. Agencies were developing or updating their regulations to reflect E.O. 13690 and the FFRMS when President Trump signed E.O. 13807. For example, the Federal Emergency Management Agency (FEMA) and the Department of Housing and Urban Development (HUD) had both published notices of proposed rulemaking. In December 2017, HUD provided notice that it was withdrawing the proposed rulemaking (pursuant to E.O. 13771 and E.O. 13777 on regulatory reform). FEMA currently requires compliance with building codes that incorporate the American Society of Civil Engineers (ASCE) flood-resistant design and construction standard (ASCE 24). The current standard (ASCE 24-14) requires most structures to be elevated to BFE+1 and critical structures to BFE+2 (or similarly elevated if the community uses a design-flood elevation [DFE] rather than a BFE) and establishes building performance requirements and siting considerations.

Considerations for Congress

Congress may consider various issues related to federal floodplain management policies and federal programs that fund development in the floodplain. For example,

- Should floodplain management be predominantly a state and local responsibility, or is there justification for a federal role in shaping resilience of investments in floodplains? Some communities (e.g., communities in Texas) have adopted building standards such as BFE+1, BFE+2, and BFE+3. Estimates are that 13 states require BFE+1 and 4 states (Indiana, Montana, New York, and Wisconsin) have BFE+2 requirements. The Hurricane Sandy Rebuilding Task Force chose to require that many Hurricane Sandy-related federally funded projects be built to BFE+1.
- How can Congress evaluate if there are net benefits of a flood-resiliency standard? The Federal Emergency Management Agency (FEMA) found net benefits of elevating at the time of construction some (but not all) structures in coastal areas in a 2016 draft report; for example, the additional costs of elevating new hospitals, police stations, and elementary schools to BFE+3 were exceeded by the benefits of additional flood resilience. Some stakeholders have criticized the draft report. Similar benefit-cost analyses for other infrastructure are not available.
- Are there changes to how federal programs are implemented that could result in long-term net benefits in terms of avoided federal assistance, lives lost, and economic disruption from disasters? Do federal policies and programs promote or deter state and local efforts to increase flood resilience and prepare for frequent flood events, as well as low-probability, high-consequence events?

Congressional debates on these questions may be shaped by flood events and their impacts, as well as by fiscal and federalism considerations. Congressional discussions also may be informed by stakeholder views and assessments, such as the Government Accountability Office's identification of the NFIP in its 2017 High Risk Report, the Congressional Budget Office's analysis of potential hurricane damages, and the National Academy of Sciences report on disaster resilience.

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